

#7

OIBE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/939,832

DATE: 11/27/2001

TIME: 12:58:26

Input Set : N:\Crf3\RULE60\09939832.txt

Output Set: N:\CRF3\11272001\I939832.raw

ENTERED

3 <110> APPLICANT: MCTIGUE, MICHELE A.
4 WICKERSHAM, JOHN A.
5 PINKO, CHRIS
6 SHOWALTER, RICHARD
7 PARAST, CAMRAN V.
8 TEMPCYZK-RUSSEL, ANNA
9 GEHRING, MICHAEL R.
10 MROCZKOWSKI, BARBARA
11 KAN, CHEN-CHEN
12 VILLAFRANCA, J. ERNEST
13 APPELT, KRZYSZTOF
15 <120> TITLE OF INVENTION: MODIFICATIONS OF THE VEGF RECEPTOR-2 PROTEIN AND
16 METHODS OF USE
18 <130> FILE REFERENCE: 0125-0016US
20 <140> CURRENT APPLICATION NUMBER: 09/939,832
21 <141> CURRENT FILING DATE: 2001-08-28
23 <150> PRIOR APPLICATION NUMBER: 09/390,326
24 <151> PRIOR FILING DATE: 1999-09-07
26 <160> NUMBER OF SEQ ID NOS: 12
28 <170> SOFTWARE: PatentIn Ver. 2.0
30 <210> SEQ ID NO: 1
31 <211> LENGTH: 31
32 <212> TYPE: DNA
33 <213> ORGANISM: Homo sapiens
35 <400> SEQUENCE: 1
36 cagcatatgg atccagatga actcccattg g 31
38 <210> SEQ ID NO: 2
39 <211> LENGTH: 34
40 <212> TYPE: DNA
41 <213> ORGANISM: Homo sapiens
43 <400> SEQUENCE: 2
44 gcggtcgact taaacaggag gagagctcag tgtg 34
46 <210> SEQ ID NO: 3
47 <211> LENGTH: 33
48 <212> TYPE: DNA
49 <213> ORGANISM: Homo sapiens
51 <400> SEQUENCE: 3
52 gcacatatgg aacgactgcc ttatgatgcc agc 33
54 <210> SEQ ID NO: 4
55 <211> LENGTH: 38
56 <212> TYPE: DNA
57 <213> ORGANISM: Homo sapiens
59 <400> SEQUENCE: 4
60 cctgtcgact tatccagaat cctcttccat gctcaaag 38
63 <210> SEQ ID NO: 5
64 <211> LENGTH: 317
65 <212> TYPE: PRT

RAW SEQUENCE LISTING

DATE: 11/27/2001

PATENT APPLICATION: US/09/939,832

TIME: 12:58:26

Input Set : N:\Crf3\RULE60\09939832.txt

Output Set: N:\CRF3\11272001\I939832.raw

66 <213> ORGANISM: Homo sapiens

68 <400> SEQUENCE: 5

```

69 Met Asp Pro Asp Glu Leu Pro Leu Asp Glu His Cys Glu Arg Leu Pro
70   1      5      10      15
72 Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp Arg Leu Lys Leu Gly
73      20      25      30
75 Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Val Ile Glu Ala Asp Ala
76      35      40      45
78 Phe Gly Ile Asp Lys Thr Ala Thr Cys Arg Thr Val Ala Val Lys Met
79      50      55      60
81 Leu Lys Glu Gly Ala Thr His Ser Glu His Arg Ala Leu Met Ser Glu
82  65      70      75      80
84 Leu Lys Ile Leu Ile His Ile Gly His His Leu Asn Val Val Asn Leu
85      85      90      95
87 Leu Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu Met Val Ile Val Glu
88      100     105     110
90 Phe Cys Lys Phe Gly Asn Leu Ser Thr Tyr Leu Arg Ser Lys Arg Asn
91      115     120     125
93 Glu Phe Val Pro Tyr Lys Glu Ala Pro Glu Asp Leu Tyr Lys Asp Phe
94      130     135     140
96 Leu Thr Leu Glu His Leu Leu Ile Cys Tyr Ser Phe Gln Val Ala Lys
97 145     150     155     160
99 Gly Met Glu Phe Leu Ala Ser Arg Lys Cys Ile His Arg Asp Leu Ala
100      165     170     175
102 Ala Arg Asn Ile Leu Leu Ser Glu Lys Asn Val Val Lys Ile Cys Asp
103      180     185     190
105 Phe Gly Leu Ala Arg Asp Ile Tyr Lys Asp Pro Asp Tyr Val Arg Lys
106      195     200     205
108 Gly Asp Ala Arg Leu Pro Leu Lys Trp Met Ala Pro Glu Thr Ile Phe
109      210     215     220
111 Asp Arg Val Tyr Thr Ile Gln Ser Asp Val Trp Ser Phe Gly Val Leu
112 225     230     235     240
114 Leu Trp Glu Ile Phe Ser Leu Gly Ala Ser Pro Tyr Pro Gly Val Lys
115      245     250     255
117 Ile Asp Glu Glu Phe Cys Arg Arg Leu Lys Glu Gly Thr Arg Met Arg
118      260     265     270
120 Ala Pro Asp Tyr Thr Thr Pro Glu Met Tyr Gln Thr Met Leu Asp Cys
121      275     280     285
123 Trp His Gly Glu Pro Ser Gln Arg Pro Thr Phe Ser Glu Leu Val Glu
124      290     295     300
126 His Leu Gly Asn Leu Leu Gln Ala Asn Ala Gln Gln Asp
127 305     310     315

```

131 <210> SEQ ID NO: 6

132 <211> LENGTH: 386

133 <212> TYPE: PRT

134 <213> ORGANISM: E. coli

136 <400> SEQUENCE: 6

```

137 Asp Pro Met Gln Leu Pro Tyr Asp Ser Arg Trp Glu Phe Pro Arg Asp
138   1      5      10      15

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/939,832

DATE: 11/27/2001

TIME: 12:58:26

Input Set : N:\Crf3\RULE60\09939832.txt

Output Set: N:\CRF3\11272001\I939832.raw

```

140 Gly Leu Val Leu Gly Arg Val Leu Gly Ser Gly Ala Phe Gly Lys Val
141          20          25          30
143 Val Glu Gly Thr Ala Tyr Gly Leu Ser Arg Ser Gln Pro Val Met Lys
144          35          40          45
146 Val Ala Val Lys Met Leu Lys Pro Thr Ala Arg Ser Ser Glu Lys Gln
147          50          55          60
149 Ala Leu Met Ser Glu Leu Lys Ile Met Thr His Leu Gly Pro His Leu
150 65          70          75          80
152 Asn Ile Val Asn Leu Gly Ala Cys Thr Lys Ser Gly Pro Ile Tyr
153          85          90          95
155 Ile Ile Thr Glu Tyr Cys Phe Tyr Gly Asp Leu Val Asn Tyr Leu His
156          100         105         110
158 Lys Asn Arg Asp Ser Phe Leu Ser His His Pro Glu Lys Pro Lys Lys
159          115         120         125
161 Glu Leu Asp Ile Phe Gly Leu Asn Pro Ala Asp Glu Ser Thr Arg Ser
162          130         135         140
164 Tyr Val Ile Leu Ser Phe Glu Asn Asn Gly Asp Tyr Met Asp Met Lys
165 145         150         155         160
167 Gln Ala Asp Thr Thr Gln Tyr Val Pro Met Leu Glu Arg Lys Glu Val
168          165         170         175
170 Ser Lys Tyr Ser Asp Ile Gln Arg Ser Leu Tyr Asp Arg Pro Ala Ser
171          180         185         190
173 Tyr Lys Lys Lys Ser Met Leu Asp Ser Glu Val Lys Asn Leu Leu Ser
174          195         200         205
176 Asp Asp Asn Ser Glu Gly Leu Thr Leu Leu Asp Leu Leu Ser Phe Thr
177          210         215         220
179 Tyr Gln Val Ala Arg Gly Met Glu Phe Leu Ala Ser Lys Asn Cys Val
180 225         230         235         240
182 His Arg Asp Leu Ala Ala Arg Asn Val Leu Leu Ala Gln Gly Lys Ile
183          245         250         255
185 Val Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp Ile Met His Asp Ser
186          260         265         270
188 Asn Tyr Val Ser Lys Gly Ser Thr Phe Leu Pro Val Lys Trp Met Ala
189          275         280         285
191 Pro Glu Ser Ile Phe Asp Asn Leu Tyr Thr Thr Leu Ser Asp Val Trp
192          290         295         300
194 Ser Tyr Gly Ile Leu Leu Trp Glu Ile Phe Ser Leu Gly Gly Thr Pro
195 305         310         315         320
197 Tyr Pro Gly Met Met Val Asp Ser Thr Phe Tyr Asn Lys Ile Lys Ser
198          325         330         335
200 Gly Tyr Arg Met Ala Lys Pro Asp His Ala Thr Ser Glu Val Tyr Glu
201          340         345         350
203 Ile Met Val Lys Cys Trp Asn Ser Glu Pro Glu Lys Arg Pro Ser Phe
204          355         360         365
206 Tyr His Leu Ser Glu Ile Val Glu Asn Leu Leu Pro Gly Gln Tyr Lys
207          370         375         380
209 Lys Ser
210 385
213 <210> SEQ ID NO: 7

```

RAW SEQUENCE LISTING

DATE: 11/27/2001

PATENT APPLICATION: US/09/939,832

TIME: 12:58:26

Input Set : N:\Crf3\RULE60\09939832.txt

Output Set: N:\CRF3\11272001\I939832.raw

```

214 <211> LENGTH: 310
215 <212> TYPE: PRT
216 <213> ORGANISM: Homo sapiens
218 <400> SEQUENCE: 7
219 Met Leu Ala Gly Val Ser Glu Tyr Glu Leu Pro Glu Asp Pro Arg Trp
220 1 5 10 15
222 Glu Leu Pro Arg Asp Arg Leu Val Leu Gly Lys Pro Leu Gly Glu Gly
223 20 25 30
225 Cys Phe Gly Gln Val Val Leu Ala Ile Glu Leu Asp Lys Asp
226 35 40 45
228 Lys Pro Asn Arg Val Thr Lys Val Ala Val Lys Met Leu Lys Ser Asp
229 50 55 60
231 Ala Thr Glu Lys Asp Leu Ser Asp Leu Ile Ser Glu Met Glu Met Met
232 65 70 75 80
234 Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn Leu Leu Gly Ala Cys
235 85 90 95
237 Thr Gln Asp Gly Pro Leu Tyr Val Ile Val Glu Tyr Ala Ser Lys Gly
238 100 105 110
240 Asn Leu Arg Glu Tyr Leu Gln Ala Arg Arg Pro Pro Gly Leu Glu Tyr
241 115 120 125
243 Cys Tyr Asn Pro Ser His Asn Pro Glu Glu Gln Leu Ser Ser Lys Asp
244 130 135 140
246 Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly Met Glu Tyr Leu Ala
247 145 150 155 160
249 Ser Lys Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu Val
250 165 170 175
252 Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe Gly Leu Ala Arg Asp
253 180 185 190
255 Ile His His Ile Asp Tyr Tyr Lys Lys Thr Thr Asn Gly Arg Leu Pro
256 195 200 205
258 Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Ile Tyr Thr His
259 210 215 220
261 Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe Thr
262 225 230 235 240
264 Leu Gly Gly Ser Pro Tyr Pro Gly Val Pro Val Glu Glu Leu Phe Lys
265 245 250 255
267 Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro Ser Asn Cys Thr Asn
268 260 265 270
270 Glu Leu Tyr Met Met Met Arg Asp Cys Trp His Ala Val Pro Ser Gln
271 275 280 285
273 Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu Asp Arg Ile Val Ala
274 290 295 300
276 Leu Thr Ser Asn Gln Glu
277 305 310
280 <210> SEQ ID NO: 8
281 <211> LENGTH: 297
282 <212> TYPE: PRT
283 <213> ORGANISM: Homo sapiens
285 <400> SEQUENCE: 8

```

RAW SEQUENCE LISTING

DATE: 11/27/2001

PATENT APPLICATION: US/09/939,832

TIME: 12:58:26

Input Set : N:\Crf3\RULE60\09939832.txt

Output Set: N:\CRF3\11272001\I939832.raw

```

286 Val Phe Pro Cys Ser Val Tyr Val Pro Asp Glu Trp Glu Val Ser Arg
287   1           5           10           15
289 Glu Lys Ile Thr Leu Leu Arg Glu Leu Gly Gln Gly Ser Phe Gly Met
290           20           25           30
292 Val Tyr Glu Gly Asn Ala Arg Asp Ile Ile Lys Gly Glu Ala Glu Thr
293           35           40           45
295 Arg Val Ala Val Lys Thr Val Asn Glu Ser Ala Ser Leu Arg Glu Arg
296           50           55           60
298 Ile Glu Phe Leu Asn Glu Ala Ser Val Met Lys Gly Phe Thr Cys His
299   65           70           75           80
301 His Val Val Arg Leu Leu Gly Val Val Ser Lys Gly Gln Pro Thr Leu
302           85           90           95
304 Val Val Met Glu Leu Met Ala His Gly Asp Leu Lys Ser Tyr Leu Arg
305           100          105          110
307 Ser Leu Arg Pro Glu Ala Glu Asn Asn Pro Gly Arg Pro Pro Pro Thr
308           115          120          125
310 Leu Gln Glu Met Ile Gln Met Ala Ala Glu Ile Ala Asp Gly Met Ala
311           130          135          140
313 Tyr Leu Asn Ala Lys Lys Phe Val His Arg Asp Leu Ala Ala Arg Asn
314  145           150          155          160
316 Cys Met Val Ala His Asp Phe Thr Val Lys Ile Gly Asp Phe Gly Met
317           165          170          175
319 Thr Arg Asp Ile Tyr Glu Thr Asp Tyr Tyr Arg Lys Gly Gly Lys Gly
320           180          185          190
322 Leu Leu Pro Val Arg Trp Met Ala Pro Glu Ser Leu Lys Asp Gly Val
323           195          200          205
325 Phe Thr Thr Ser Ser Asp Met Trp Ser Phe Gly Val Val Leu Trp Glu
326           210          215          220
328 Ile Thr Ser Leu Ala Glu Gln Pro Tyr Gln Gly Leu Ser Asn Glu Gln
329  225           230          235          240
331 Val Leu Lys Phe Val Met Asp Gly Gly Tyr Leu Asp Gln Pro Asp Asn
332           245          250          255
334 Cys Pro Glu Arg Val Thr Asp Leu Met Arg Met Cys Trp Gln Phe Asn
335           260          265          270
337 Pro Asn Met Arg Pro Thr Phe Leu Glu Ile Val Asn Leu Leu Lys Asp
338           275          280          285
340 Asp Leu His Pro Ser Phe Pro Glu Val
341   290           295
344 <210> SEQ ID NO: 9
345 <211> LENGTH: 367
346 <212> TYPE: PRT
347 <213> ORGANISM: Homo sapiens
349 <400> SEQUENCE: 9
350 Met Asp Pro Asp Glu Val Pro Leu Asp Glu Gln Cys Glu Arg Leu Pro
351   1           5           10           15
353 Tyr Asp Ala Ser Lys Trp Glu Phe Ala Arg Glu Arg Leu Lys Leu Gly
354           20           25           30
356 Lys Ser Leu Gly Arg Gly Ala Phe Gly Lys Val Val Gln Ala Ser Ala
357           35           40           45

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/939,832

DATE: 11/27/2001

TIME: 12:58:27

Input Set : N:\Crf3\RULE60\09939832.txt

Output Set: N:\CRF3\11272001\I939832.raw